

Ambiental

Science Park Square
Brighton
East Sussex, BN1 9SB

Date 06/04/2022 13:19
File PROPOSED.SRCX

Innovyze

6 Raisins Hill
HA5 2BS
6369

Designed by OH
Checked by SB

Source Control 2018.1

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 180 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	53.438	0.238	0.0	0.2	0.2	2.8	O K
30 min Summer	53.493	0.293	0.0	0.3	0.3	3.6	O K
60 min Summer	53.538	0.338	0.0	0.3	0.3	4.3	O K
120 min Summer	53.561	0.361	0.0	0.3	0.3	4.7	O K
180 min Summer	53.561	0.361	0.0	0.3	0.3	4.7	O K
240 min Summer	53.556	0.356	0.0	0.3	0.3	4.6	O K
360 min Summer	53.544	0.344	0.0	0.3	0.3	4.4	O K
480 min Summer	53.530	0.330	0.0	0.3	0.3	4.2	O K
600 min Summer	53.515	0.315	0.0	0.3	0.3	4.0	O K
720 min Summer	53.501	0.301	0.0	0.3	0.3	3.8	O K
960 min Summer	53.476	0.276	0.0	0.2	0.2	3.4	O K
1440 min Summer	53.434	0.234	0.0	0.2	0.2	2.8	O K
2160 min Summer	53.387	0.187	0.0	0.2	0.2	2.1	O K
2880 min Summer	53.354	0.154	0.0	0.2	0.2	1.6	O K
4320 min Summer	53.311	0.111	0.0	0.2	0.2	0.9	O K
5760 min Summer	53.286	0.086	0.0	0.1	0.1	0.6	O K
7200 min Summer	53.268	0.068	0.0	0.1	0.1	0.3	O K
8640 min Summer	53.256	0.056	0.0	0.1	0.1	0.2	O K
10080 min Summer	53.246	0.046	0.0	0.1	0.1	0.2	O K
15 min Winter	53.463	0.263	0.0	0.2	0.2	3.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	143.129	0.0	3.0	18
30 min Summer	93.302	0.0	3.9	33
60 min Summer	57.877	0.0	5.0	62
120 min Summer	34.670	0.0	6.0	120
180 min Summer	25.347	0.0	6.6	148
240 min Summer	20.178	0.0	7.0	180
360 min Summer	14.609	0.0	7.6	246
480 min Summer	11.612	0.0	8.1	316
600 min Summer	9.711	0.0	8.4	384
720 min Summer	8.388	0.0	8.7	454
960 min Summer	6.652	0.0	9.2	586
1440 min Summer	4.791	0.0	9.9	848
2160 min Summer	3.445	0.0	10.7	1212
2880 min Summer	2.724	0.0	11.2	1584
4320 min Summer	1.953	0.0	12.0	2292
5760 min Summer	1.542	0.0	12.5	3000
7200 min Summer	1.282	0.0	12.9	3680
8640 min Summer	1.103	0.0	13.1	4408
10080 min Summer	0.971	0.0	13.4	5136
15 min Winter	143.129	0.0	3.4	18

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
30 min Winter	53.525	0.325	0.0	0.3	0.3	4.1	O K
60 min Winter	53.577	0.377	0.0	0.3	0.3	4.9	O K
120 min Winter	53.607	0.407	0.0	0.3	0.3	5.4	O K
180 min Winter	53.607	0.407	0.0	0.3	0.3	5.4	O K
240 min Winter	53.601	0.401	0.0	0.3	0.3	5.3	O K
360 min Winter	53.584	0.384	0.0	0.3	0.3	5.0	O K
480 min Winter	53.563	0.363	0.0	0.3	0.3	4.7	O K
600 min Winter	53.542	0.342	0.0	0.3	0.3	4.4	O K
720 min Winter	53.522	0.322	0.0	0.3	0.3	4.1	O K
960 min Winter	53.486	0.286	0.0	0.2	0.2	3.5	O K
1440 min Winter	53.428	0.228	0.0	0.2	0.2	2.7	O K
2160 min Winter	53.367	0.167	0.0	0.2	0.2	1.8	O K
2880 min Winter	53.328	0.128	0.0	0.2	0.2	1.2	O K
4320 min Winter	53.283	0.083	0.0	0.1	0.1	0.5	O K
5760 min Winter	53.258	0.058	0.0	0.1	0.1	0.3	O K
7200 min Winter	53.243	0.043	0.0	0.1	0.1	0.1	O K
8640 min Winter	53.234	0.034	0.0	0.1	0.1	0.1	O K
10080 min Winter	53.228	0.028	0.0	0.1	0.1	0.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
30 min Winter	93.302	0.0	4.4	32
60 min Winter	57.877	0.0	5.6	60
120 min Winter	34.670	0.0	6.7	116
180 min Winter	25.347	0.0	7.4	168
240 min Winter	20.178	0.0	7.9	190
360 min Winter	14.609	0.0	8.5	266
480 min Winter	11.612	0.0	9.1	342
600 min Winter	9.711	0.0	9.5	416
720 min Winter	8.388	0.0	9.8	486
960 min Winter	6.652	0.0	10.4	626
1440 min Winter	4.791	0.0	11.2	894
2160 min Winter	3.445	0.0	12.0	1272
2880 min Winter	2.724	0.0	12.6	1620
4320 min Winter	1.953	0.0	13.5	2332
5760 min Winter	1.542	0.0	14.1	3000
7200 min Winter	1.282	0.0	14.5	3672
8640 min Winter	1.103	0.0	14.9	4408
10080 min Winter	0.971	0.0	15.1	5136

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.400	Shortest Storm (mins)	15
Ratio R	0.416	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.012

Time (mins)	Area
From:	To: (ha)
0	4 0.012

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<u>Model Details</u> Storage is Online Cover Level (m) 53.800 <u>Porous Car Park Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.00000</td> <td>Width (m)</td> <td>5.0</td> </tr> <tr> <td>Membrane Percolation (mm/hr)</td> <td>1000</td> <td>Length (m)</td> <td>10.0</td> </tr> <tr> <td>Max Percolation (l/s)</td> <td>13.9</td> <td>Slope (1:X)</td> <td>100.0</td> </tr> <tr> <td>Safety Factor</td> <td>2.0</td> <td>Depression Storage (mm)</td> <td>5</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> <td>Evaporation (mm/day)</td> <td>3</td> </tr> <tr> <td>Invert Level (m)</td> <td>53.200</td> <td>Membrane Depth (m)</td> <td>0</td> </tr> </table> <u>Orifice Outflow Control</u> Diameter (m) 0.015 Discharge Coefficient 0.600 Invert Level (m) 53.200			Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	5.0	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	13.9	Slope (1:X)	100.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	53.200	Membrane Depth (m)	0
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